# Kootenay Lake Timber Supply Area
# Timber Supply Review

## Summary of Public Input

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This is a summary of the public input received on the Timber Supply Review in the Kootenay Lake Timber Supply Area. This summary does not assess the feasibility or validity of the input or whether it relates to the clearly defined mandate of the chief forester in the allowable annual cut determination.

104-01794/

# Kootenay Lake Timber Supply Area

## Background

As part of the review of timber supply in the Kootenay Lake Timber Supply Area (TSA), two opportunities were provided for public input. The first followed release of the Kootenay Lake TSA *Data Package* and *Information Report* in May 1999. The *Information Report* was a non-technical summary of the draft data and management assumptions that were to be applied in reviewing the timber supply for the Kootenay Lake TSA. A 30-day review period, ending June 7, 1999, was provided for the public to comment on these documents. This date was extended to July 16, 1999.

On March 21, 2001, the British Columbia Forest Service released the *2001 Kootenay Lake Timber Supply Area Analysis Report* and *Public Discussion Paper*. The public was encouraged to review and comment on the accuracy of the information in these documents and to provide additional information during the 45-day review period that ended May 22, 2001.

This report summarizes the input received during both public review periods. This information was provided to the chief forester for his consideration when he reviewed the allowable annual cut (AAC) for the Kootenay Lake TSA. The first section of this summary outlines the public review process implemented by the Forest Service, and describes the types of public input received. The second section summarizes the public input in sufficient detail to indicate the range of input received. The original submissions (with personal identifiers removed in accordance with the *Freedom of Information and Protection of Privacy Act*) can be reviewed at the Kootenay Lake Forest District office.

## Public Review Process and Response

Kootenay Lake District staff actively solicited public input on the Timber Supply Review in the Kootenay Lake TSA through the following actions:

- 82 copies of the *Information Report*, *Data Package*, *Public Discussion Paper* and *Analysis Report* were mailed to stakeholders in the TSA, such as First Nations, forest licensees, water users, environmental groups and local governments. In a cover letter, meetings or presentations were offered on request.
- the *Data Package* and *Analysis Report* were available at the district office north of Nelson and the regional office in Nelson; approximately 40 were picked up.
- newspaper advertisements were placed, advising of the availability of all documents for review by the public.
- copies of all the documents were made available to the local media, along with contact names for follow-up interviews. One radio interview was conducted.
- a presentation on the *Analysis Report* was made to the Creston Public Advisory Committee (a Round Table forum) on April 24, 2001.

The Kootenay Lake Forest District received eight written submissions on the *Data Package* and 12 submissions on the *Analysis Report* (see Appendix 1).

## Public Input

In this section, public input on the information presented in the Timber Supply Review documents for the Kootenay Lake TSA is summarized under the following headings:

- Data Package (and Information Report)
- Timber Supply Area Analysis Report (and Public Discussion Paper)
- Other comments

## Data Package

### Operable Land Base

Two forest industry submissions say that eight percent of current operations are above the operability line and this must be incorporated as current practice in the base case. Another submission expresses agreement with not changing operability lines, saying that the last couple of years of market ups- and-downs indicate this factor is subject to wide fluctuations.

The Interior Lumber Manufacturers' Association (ILMA) asks if industry has agreed to the areas excluded from the land base as uneconomic and whether a partition was considered. Two other submissions say a portion of Lake Creek should be excluded due to high development costs, the rejection of the forest development plan in that area, and the potential impacts of harvesting and road-building.

### Environmentally Sensitive Areas

An individual submission says replacing Environmentally Sensitive Area (ESA) mapping for sensitive soils with new terrain mapping is a positive step, while the Queens Bay Residents Association (Queens Bay Association) says existing terrain mapping is highly inaccurate, based on recent experience of mass wasting events in areas mapped as stable. Both submissions recommend increasing the netdowns for sensitive soils, particularly in domestic and high value fisheries watersheds.

The Kootenay Lake Forestry Association (Forestry Association) agrees with the use of terrain mapping information and recommends a reduction to certain sensitive soil netdowns.

The ILMA questions why a land base reduction is applied for ESAs. This should be handled as a volume reduction, consistent with other TSAs, according to this submission.

### Low Productivity Types

The Forestry Association expresses concern that some sites may be dropped because of inaccurate site index estimations in old-growth stands.

An individual submission says forest cover typing at high elevations is not very reliable and recommends removing anything labeled alpine with a forest type as well as those simply labeled alpine, or the use of biogeoclimatic zonation and the removal of all stands mapped as parkland or alpine tundra.

### Problem Forest Types

The Forestry Association says that just because older white pine is rare is no reason to eliminate its availability with a 100 percent reduction.

Two submissions question the 50 percent reduction for aspen-leading stands. One says these stands should be 100 percent excluded as they have insignificant coniferous components.

### Roads, Trails & Landings

The Queens Bay Association says existing rights-of-way should be counted as permanently unstocked and be included in early seral calculations. Two submissions question the assumption of no detrimental disturbance from future trails, based on 100 percent rehabilitation, noting other disturbance from harvesting and treatments such as stumping will still occur.

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Two forest industry submissions say the average right-of-way width of 18 metres overestimates the impact of roads, citing a study in Golden that indicated an average width of 11 metres. The Forestry Association says widths should vary depending on road type and provides recommendations and an alternate formula for calculating road widths. The association also notes the *Data Package* has no information on future reductions, and this is a significant shortcoming.

### Forest Inventory

The ILMA asks how the results of the inventory audit will be incorporated in the analysis.

### Minimum Harvestable Age

The Forestry Association says Table 15 (minimum harvestable age criteria) is confusing, but suggests that a maximum slope cut-off of 40 percent is better than 35 percent. The ILMA says slope criteria should not have an impact on minimum harvestable age and notes the lack of data to comment on.

### Managed Stand Volumes

Four submissions comment on the operational adjustment factor (OAF2) used to account for volume losses that increase with age (e.g., due to disease). Two submissions say the OAF2 of 15 percent is too low and should be increased to 20-25 percent, citing the following reasons:

- recent pathologist's studies indicate a 20 percent loss to root rot is more reasonable.
- climate change will potentially increase the incidence of some diseases and pests.

Two forest industry submissions say the use of a 15 percent OAF2 is unacceptable without clear empirical evidence, and this factor should be reduced to five or seven percent. They also ask how genetic gains will be modeled and how results of the Old Growth Site Index (OGSI) study will be used.

### Not Satisfactorily Restocked Areas

An individual submission says the assumptions about restocking Not Satisfactorily Restocked (NSR) areas are overly optimistic given recent budget cuts, especially to Forest Renewal B.C., and recommends they be reduced by half. This individual also says it seems unrealistic to assume the future use of herbicides.

The Queens Bay Association says all backlog NSR should be removed from the timber harvesting land base (THLB) until successfully restocked.

The Forestry Association disagrees with Table 21b of the *Data Package*, saying all current operable NSR will be reforested within one to three years, and then the rest will be reforested.

### Forest Cover Constraints

The Forestry Association questions why the Integrated Resource Management (IRM) zone is limited to a maximum of 25 percent of the area under two metres tall at any one time. Given the importance of the IRM zone for fibre supply, this should be increased to at least 35 percent, according to the association.

### Visually Sensitive Areas

The Forestry Association provides recommendations on disturbance levels in visually sensitive areas, noting that current cut block design and the use of portrait cutting facilitates a higher level of disturbance. An individual and the Queens Bay Association say the inventory overestimates the availability of visually sensitive timber, because the 1998 update was not subject to adequate public review and does not reflect standards of public acceptance and the needs of a growing tourism sector.

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### Watersheds

Two submissions say that based on recent research, a green-up height of nine metres in watersheds is insufficient. The Forestry Association says stands contribute to hydrologic green-up in progressive percentages, not just at a nine-metre height. The association says a sliding scale should be used or the nine metres prorated to reflect the contribution of shorter stands.

An individual submission says the cover constraints for community watersheds should also be applied to high value fisheries watersheds. The Forestry Association says that not every watershed is sensitive and the allowable disturbance should be 23 to 25 percent, based on licensees' estimation of current practice. The association also questions how private land is dealt with.

The ILMA says watershed constraints result from the Kootenay-Boundary Land-Use Plan (KBLUP) Implementation Strategy and should therefore be modeled as sensitivity analyses only.

### Riparian Management

Three forest industry submissions say the netdowns for riparian reserve and management zones are not consistent with the Forest Practices Code. Suggested changes are provided by the Forestry Association.

Two submissions say the reserve estimates for smaller streams will be severely underestimated due to the scale of the BC Watershed Atlas. A lack of information to identify fish-bearing streams is also noted.

An individual submission says the 1998 Riparian Management Audit identified that riparian guidelines may have a larger impact than outlined in the *Data Package*, due to licensees locating cutblocks to avoid implementing actual management zones. This would have the effect of reducing apparent timber availability (due to isolating some stands) and should be examined in a sensitivity analysis, according to this submission.

### Wildlife

Two forest industry submissions say reductions to the THLB for Wildlife Habitat Areas should only occur when these areas are established in law.

The Forestry Association says a one percent reduction for grizzly bears is totally inappropriate as the KLBUP task force confirmed security cover would not be a separate deduction. An individual says land base deductions should not be limited to grizzly bears and an additional one or two percent is needed for management of other species.

The Forestry Association says work is ongoing on the mapping of caribou priority habitat and requests a sensitivity analysis to assess the impact of the revised mapping. The ILMA says caribou habitat must be modeled as a sensitivity only.

The Forestry Association questions the use of the current ungulate winter range map, which they say grossly overestimates the area. They say industry has submitted revised mapping and it should be used in the base case or at least in a sensitivity analysis. The association says the ministry's approach to ungulate range guarantees cover but not food supply.

### Stand Level Biodiversity

An individual submission says the Wildlife Tree Patch (WTP) requirements are too low, noting that Table 20(b) of the *Biodiversity Handbook* should be used to establish these requirements since biodiversity emphasis objectives (BEOs) are not yet established.

The ILMA asks for confirmation that the modeling impacts of WTPs are volume only (not land base). The ILMA and the Forestry Association ask why the chief forester's direction of a total impact of 1.8 percent for WTPs is not being followed.

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### Landscape Level Biodiversity

An individual submission says the cover requirements for old and mature should be increased for Interior Cedar-Hemlock units, referring to Appendix 4 of the *Biodiversity Guidebook* that says where 12 percent protected does not exist (as in the ICH), the requirement can be adjusted for the actual percentage protected.

This individual, again referring to Appendix 4, says old and mature forests in protected areas were already counted once in setting cover requirements and should not be allowed to contribute a second time during the analysis.

The Queens Bay Association says the analysis should use only the actual old forest present, not numbers that assume 12 percent protected in each biogeoclimatic unit. The association recommends a sensitivity analysis on immediate full implementation of the old seral requirement for low BEO areas, saying the three-rotation delay is an unreasonably long time to allow for compliance and represents an unacceptable threat to biodiversity.

The ILMA says the analysis should not model KBLUP requirements, such as old seral patches, except in sensitivity analyses. The association expresses concern about the placement and guidelines for all resource emphasis areas. The Forestry Association expresses similar concerns and says there's a significant legal question as to whether landscape unit boundaries and BEOs can be legalized without objectives being set. Until this is resolved the Forestry Association says BEOs should be treated as a sensitivity.

### Unsalvaged Losses

Two submissions say climate change may radically impact unsalvaged losses and these estimates should be increased or at least examined in a sensitivity analysis.

The Forestry Association says the estimates appear realistic but the distribution could be reconfigured. The ILMA requests the inputs to these estimates be reviewed by licensees.

### Kootenay-Boundary Land-Use Plan

The ILMA says the analysis should focus on Code requirements only, given the current state of confusion over the status of the KBLUP which currently has no standing in law. The Forestry Association says KBLUP is government policy but the Code takes precedence, as it is law.

### Harvest Sequencing

Three submissions express agreement with the use of a random harvest queue in the analysis, while the ILMA says the 'oldest first' rule must be used to be consistent with the rest of the province.

### Socio-Economic Factors

An individual submission notes that employment is already diverse in this TSA, and the area is a destination for tourism and also for people seeking a high quality of life. Local businesses are already demonstrating initiative in coping with changes in the forest industry (e.g., log sort yards, value-added mills), according to this submission.

## Timber Supply Area Analysis Report

### Land Base Factors

Tembec Industries Ltd. says licensee data indicates that more than eight percent of the harvest currently occurs in the inoperable. The company says the need for a more dispersed cut combined with landscape design, enhanced terrain assessments, increased total resource planning and proven licensee performance will result in a much higher percentage of harvesting in areas currently excluded.

The Forestry Association says a study conducted by major licensees of all blocks harvested between 1994 and 1998 demonstrated

that 5.3 percent of the cut came from above the operability line, and notes that current forest development plans indicate an increasing trend. The association says that since only 21 percent of the entire land base in this TSA is considered available for harvest, one can't help but think the THLB may be underestimated and provides an approach to more accurately estimate it.

The Valhalla Society says there would be increased pressure to lower the operability line if licensees had to pay the actual costs of logging on steep slopes (e.g., remediation costs for landslide damage).

Two submissions say major portions of Lake Creek should be excluded from the THLB, given environmental risks and costs associated with harvesting there. Tembec says the licensee in East Creek indicates that development opportunities do in fact exist there. The Erickson Water Users Society (Erickson Water Users) says the size of the THLB needs to be reduced immediately by removing all domestic and community watersheds and areas of old-growth forest.

Two submissions say that given uncertainty about export markets, the implications of eco-certification and pressures from other forest users it would be prudent to assume the base case is overly optimistic in estimating the size of the THLB. They say heli-logging above the operability line depends on extremely high markets and it's unwise to include these areas in the base case.

An individual submission says the Midge Creek drainage should be available for harvesting.

### Environmentally Sensitive Areas

The Kootenay Centre for Forestry Alternatives (KCFA) says the estimates of area unavailable for harvesting in areas mapped as unstable (class V) or potentially unstable (class IV) may be low. Based on a review of terrain maps, KCFA says it appears mappers tend to classify areas as class V only if they are actively sliding, indicating the chance of harvesting is very slim and an assumption of 100 percent unavailable would be reasonable. The reduction in class IV areas would be better modelled at 40 percent given uncertainty around the number and the presence of other resource values, according to KCFA.

The KLFA questions the 30 percent netdown used for class IV/potentially unstable areas. While they do not have data to counter the netdown, the association believes future assessments will support their position.

#### Roads, Trails and Landings (RTLs)

Tembec agrees that 7.5 percent may overestimate the area of existing trails and landings. Tembec and the KLFA provide information on actual road widths. The Queens Bay Association notes the lack of justification for the 36 percent decrease in RTL deductions from the previous Timber Supply Review.

Two submissions say the new methodology does not account for unmapped roads, or trails and landings. They say the 11 percent deduction used in the previous Timber Supply Review is likely reasonable, plus three to four percent for landings, trails and other unmapped disturbances. The two submissions say future RTLs should also remain at 11 percent as newer roads climb into steeper terrain and require wider right-of-ways.

### Volume Estimates in Existing Stands

The KLFA says that until more information is gathered to justify changes to estimates of existing stand yields, they agree with the base case estimates.

### Managed Stand Volumes

Tembec notes the OGSI study resulted in a consistent trend across the province that site productivity is underestimated, and says conservative increases could be rationalized in the absence of hard data. The company also says genetic gains are underestimated in the analysis.

The KLFA says the yield from managed stands is underestimated, and yield curves need to be adjusted to reflect genetically improved stock, site index adjustments and other factors. The association notes that experience in the Arrow TSA and TFL 14 with PEM (predictive ecosystem mapping) showed gains in site index, and a similar result is anticipated in Kootenay Lake TSA.

KCFA says potential gains from genetic improvement and OGSI are highly speculative with little or no local data.

Two submissions say the use of the TIPSY model for projecting growth in managed stands is highly speculative and recommend a 10 percent decrease in yields.

With regard to the operational adjustment factor (OAF2) used in the analysis, three submissions say the change from 15 percent to seven percent is not supported by information from local Ministry of Forests pathology experts. They say losses from Armillaria alone may well exceed seven percent and clearcutting is a known factor in the spread of the disease.

Tembec also questions the arbitrary use of seven percent for OAF2, saying it should remain at the provincial standard of five percent. The Forestry Association says the increase from the provincial standard to seven percent is reasonable, but more work is needed to accurately quantify losses due to Armillaria.

### Regeneration Factors

Three submissions question the assumption of regeneration delays of two and three years being current practice. They say this implies every block must be planted or naturally regenerated immediately with zero failures, and that delays of three to six years is more reasonable. Even if the shorter delay were true, these submissions say it has important biodiversity implications for species that depend on early seral habitats.

KCFA says the schedule for achieving full stocking of NSR areas may be overly optimistic given uncertainty about Forest Renewal funding and about the use of herbicides in the Kootenay Lake area.

### Silvicultural Systems

Two submissions note that no partial cutting was modelled although this is a requirement for meeting Higher Level Plan caribou objectives, and could also potentially be used to increase timber access in watersheds or visual management areas.

### Forest Cover Requirements

The Valhalla Society says the analysis allows too high a percentage of the THLB to be below green-up age and this must be reduced. The society and KCFA express the opinion that green-up ages have been underestimated. Tembec says the reduction in green-up ages can be rationalized based on OGSI results or genetic gains, while the Forestry Association points to licensee experience in the Arrow TSA where the time to achieve the green-up height was overestimated by 17 to 30 percent.

Tembec and the Forestry Association say the level of disturbance (equivalent clearcut area, or ECA) is not currently viewed as a binding constraint on the land base but rather an indicator of planning acceptability. The two submissions say a suitable rationale will in most cases permit harvesting above the ECA threshold.

The Erickson Water Users' submission says a two-metre green-up height is ludicrous in terms of water quality.

### Visually Sensitive Areas

Tembec says a relaxation in visual quality objective limits is not unrealistic given the increasing use of visual design packages and because visual absorption capacity is higher in many visually sensitive areas as harvesting is already present. The Forestry Association says the current emphasis on good cutblock design, with the strategic placement of retention areas

and selective systems, demonstrates that the disturbance limits used in the analysis can be and are being exceeded.

Three submissions say the current objectives are not sufficient, noting that public expectations and the increasing importance of tourism will increase constraints as has already occurred in a number of local planning processes.

### Watersheds

The Valhalla Society says protection of water quality, quantity and timing should be the primary objective in all consumptive use watersheds. The society says a reduction in permissible disturbance and an increase in the green-up age are necessary, and important and sensitive watersheds must be removed from the THLB.

The Queens Bay Association says while some harvesting has occurred in previously deferred watersheds, the level of harvest suggested by the watershed guidelines has not been accomplished, and reductions in harvest levels should be accounted for in the analysis.

KCFA says the constraints modeled appear to be consistent with current practice, but given increasing awareness about water one might assume constraints may increase, creating a downward pressure on timber supply. KCFA notes that no consideration was given to management in high value fisheries watersheds, which should also be subject to cover constraints.

Tembec says there's much confusion about how to treat streams in domestic watersheds. The company suggests the best management practices in the *Riparian Management Guidebook* be used as a surrogate to model impacts on timber supply, but not across the land base as this would falsely create a downward pressure on timber supply.

The Forestry Association is of the opinion that watershed ECAs are too conservative, given the generally accepted position that ECAs are only one of a number of indices for watershed condition. The association expresses support for the management principles for domestic watersheds outlined in the *Strategies for Kootenay-Boundary Land Use Plan*, dated May 14, 2001.

### Riparian Management

Tembec says the application of best management practices from the *Riparian Management Guidebook* to define riparian reserve zones is the exception rather than the rule, and it's perhaps more accurate to reduce the impact on timber supply by releasing some of the constraints generated by this modeling approach.

Three submissions says the base case underestimates the impacts of riparian management because a large percentage of small streams are not mapped, there's a lack of information on fish-bearing streams, and because what is modeled is the minimum and public pressure will continue to increase constraints.

An individual submission says it's now widely accepted that the requirements of the *Riparian Guidebook* are inadequate to protect riparian functions and they are also below the standards of virtually all other jurisdictions (references provided). Given the approach of forest certification in addition to emerging public expectations, it is unreasonable to expect current management will be sufficient in the future.

### Caribou and Other Wildlife

Tembec and the Forestry Association say the current approach to caribou management is viewed as conservative by many of the biologists involved and note the ongoing review of caribou habitat (and ungulate winter range). These submissions say many areas presently encumbered by caribou habitat management will ultimately be available for harvesting, as understanding of habitat requirements improves and appropriate areas are set aside. The Forestry Association also says spatially modeling smaller units encumbered by habitat management

policies generally shows increased harvest levels, due to managing to maximum annual growth.

Two submissions say the Higher Level Plan caribou guidelines for reserves were adequately modeled but the partial cutting component was ignored. It would have been more reasonable to make assumptions similar to the partial cutting management zones in riparian areas, says KCFA, and provides an example. The Valhalla Society says caribou herds are in serious decline and habitat objectives need to be increased immediately and further harvesting suspended until a viable herd can be established and maintained.

KCFA says the base case does not adequately consider the impacts of measures required to meet the Identified Wildlife provisions of the Forest Practices Code, as the *Analysis Report* indicates the full one percent cap on timber supply impacts will be consumed just protecting grizzly habitat. KCFA says the one percent cap is likely inadequate and five percent might be more reasonable, noting that the management of red- and blue-listed species was also not sufficiently considered.

### Stand Level Biodiversity

Tembec estimates that about 20 percent of established WTPs will experience a salvage operation, and therefore the 2.2 percent land base reduction could be reduced to 1.8 percent.

KCFA says the 2.2 percent reduction should increase to about five percent, and provides a rationale based on the *Biodiversity Guidebook*, professional knowledge and the fact that coarse woody debris needs were not considered.

### Landscape Level Biodiversity

The Valhalla Society says more old seral requirements need to be met on the THLB because the use of small islands of old growth in protected and inoperable areas does not represent the habitat available prior to the past 40 years of clearcutting. The society says many landscape units are in a deficit for old growth and this should be eliminated by reserving the next closest age classes to the deficit types, not by targeting clearcuts or juvenile forests and labeling them old growth recruitment areas.

The Forestry Association maintain that specifying that biodiversity objectives be met only from the THLB is inflexible and not consistent with current practices. From an ecological perspective, the licensees say, there is no operability line.

Tembec and the Forestry Association say achieving old seral targets now would be a violation of the Higher Level Plan, which allows three rotations for full implementation. The Forestry Association also makes a case for decreasing the definition of old seral by 40 years, saying that old-growth attributes still exist within slightly younger stands.

Tembec says that although confusion exists around the concept of connectivity corridors, there is regional recognition that the constrained land base currently provides many of the purported benefits. The Forestry Association says that not including connectivity corridors in the analysis may have a positive effect on timber supply as these corridors are generally very large in this TSA.

Four submissions comment on the base case assumption that excluded forests continue to age without disturbance. Tembec and the Forestry Association say enhancing fire suppression activities could easily alleviate a downward pressure on timber supply by maintaining stands outside the THLB. The Queens Bay Association and KCFA say the assumption of continuous aging is incorrect and the static age class distribution (Figure 18) might be closer to present management. The groups note the present approach is to not fight fires outside the THLB (e.g., Fry Canyon) and that windthrow, disease and insects also affect stands.

KCFA says the lack of spatially modeling Old Growth Management Areas (OGMAs) fails to account for another downward pressure on timber supply.

### Unsalvaged Losses

Three submissions say the greater than 50 percent decrease in estimated losses from the previous Timber Supply Review is not justified. The Queens Bay Association says current experience shows a substantial increase in losses to windthrow and insect attack arising in part from the effect of Armillaria in mature stands, coupled with recent drought conditions. The association and KCFA say climate change also creates an expectation of increasing losses.

### Community Forest Licences

Tembec says the current AAC for the Harrop-Procter Community Forest could be increased three to four times.

An individual submission says the Arrow Creek watershed (part of the Creston community forest licence) should not be logged as the ECA exceeds the maximum recommended for community watersheds and instead suggests a study to evaluate the feasibility of declaring the watershed a wildlife sanctuary.

The Erickson Water Users say it is neither economically nor ecologically feasible to harvest the Arrow Creek watershed, and express concern with the way in which the community forest was established and the debt the Creston Valley Forest Corporation has accumulated.

### Harvest Sequence

KCFA says the use of a 'random' harvest queuing rule in the timber supply analysis is closer to current practice than 'oldest first.' This opinion is based on reviews of forest development plans, the overlapping constraints on much of the land base, pest management priorities and the complexity of numerous operating areas in this TSA.

Tembec and the Forestry Association are of the opinion that 'relative oldest first' would best capture operational planning, which tends to occur in the oldest of those stands available for harvest.

### Implications of Alternative Rates of Harvest

The Queens Bay Association notes that direct forestry employment is only four percent of the labour force in this TSA, and non-forestry sectors depend on 'quality of life' and other values associated with maintaining a natural environment.

An individual submission challenges the pervasive bias in the analysis that higher rates of cut are better for the local economy and local communities, noting that the rate of cut affects:

- quality of life and hence people's desire to live, invest and work in the area;
- the provision of ecosystem services by forests; and,
- economic opportunities for non-timber-related businesses and for value-added operations (as high quality old growth will be liquidated).

This submission identifies a variety of factors, including legislation, policies and objectives, which imply a long-term perspective of forest management not limited to the benefits of timber production. Other factors identified in this submission indicate there would be social and economic advantages, in line with the Crown's social and economic objectives, to reducing the rate of logging.

KCFA and an individual submission say that maintaining the current AAC will pose a significant risk to environmental values (examples are provided) and increasing this risk is clearly one of the "short- and long-term implications to the province" that should be avoided. KCFA says an AAC reduction would also be consistent with direction letters about the

need to limit disruption to local economies, noting that according to the socio-economic analysis tourism is the most dynamic and expanding sector in this TSA.

## Other Comments

Most submissions comment on factors or issues other than those specifically covered by Timber Supply Review documents. These comments are summarized in this section.

### Timber Supply Review Process

Many submissions comment, some in great detail, about the process and/or methodology of the Timber Supply Review. These comments include:

- a concern that discussions with forest industry representatives occurred outside the prescribed review period and did not include other stakeholders.
- the base case is a reasonable assessment of forests and forest management in this TSA.
- the analysis was well-executed and includes modeling of most relevant factors.
- optimistic and largely speculative assumptions were used to establish the base case, demonstrating a strong and pervasive bias toward maximizing timber production.
- the analysis fails to address a number of key issues and is therefore an inadequate basis for the chief forester to use in making his determination.
- the chief forester's interpretation of "short- and long-term implications" is unduly restrictive.

### Harvest Levels

Ten submissions comment on the harvest level to be determined by the chief forester.

Tembec and the Forestry Association identify a number of possible upward pressures on timber supply. These include:

- a recognition that ungulate winter range and caribou management zones have been refined and reduced in size since the *Analysis Report* was completed.
- a recognition that the constrained land base contributes to connectivity.
- a five percent increase in estimated volume yields, based on an assessment of current recovery and planned harvesting.
- an increase in site productivity estimates, based on the results of OGSI studies.
- active fire suppression outside the THLB to maintain forests that contribute to meeting non-timber objectives.
- reduced green-up ages through the use of OGSI adjustments or genetic gains.
- a relaxation in visual quality objective limits by five percent.
- redefinition of analysis units by bumping up many stands to more productive units, thereby creating a significant increase in standing volume estimates.
- increased harvesting in areas defined as inoperable.
- lower reductions for RTLs based on rehabilitation requirements and narrower actual road widths.
- releasing some constraints generated by the riparian modeling approach.
- the approach to harvest sequence with stand entry occurring closer to culmination.
- underestimation of genetic gains.
- salvage opportunities within Wildlife Tree Patches.

The Forestry Association also expresses the opinion that a greater reliance on timber volumes from domestic watersheds and visually sensitive areas should not be viewed as a downward pressure on timber supply, saying licensees fully

anticipate that historical levels of access to the THLB will be maintained. The association says licensees expect the upcoming spatial modeling project will confirm this assumption.

Eight submissions express support for a reduction in harvest level to:

- the long-term harvest level (one)
- the average harvest level from the past five years (one)
- 550,000 cubic metres (three)
- 605,000 cubic metres (one)
- a level that excludes volumes in steep isolated valleys and forested areas between the highway and the lake along Hwy 31 and Hwy 3A on the east shore (one)
- a level representing a significant reduction, or a deferral of the decision until better socio-economic analysis is available (one)

Submissions supporting a harvest level reduction offer a variety of reasons, including:

- the harvest record since the last Timber Supply Review indicates ongoing public pressure plus licensee aversion to harvesting in sensitive areas.
- no or minor job losses would result given the shortfall in annual harvesting in recent years. It's prudent to not encourage an increase in harvesting in case the long-term harvest level proves to be 500-550,000 cubic metres as indicated by many of the sensitivity analyses.
- numerous downward pressures, including: meeting old seral requirements and creation of OGMAs; increased green-up ages, riparian requirements, RTL deductions, regeneration delays and unsalvaged losses; improved visual quality objectives; caribou and other wildlife management; reduced ECAs in some watersheds and removal of others from the THLB; and, improper inclusion of timber agreement lands in the analysis.
- maintaining the current AAC constitutes significant risk to environmental values.
- reducing pressure on other forest values supports expansion of the tourism industry.
- to maintain options for landscape unit planning and implementation of other environmental protection measures.
- the base case does not fully incorporate "constraints...that reasonably can be expected by use of the area for purposes other than timber production" such as increased environmental constraints (e.g., caribou have recently been red-listed).
- all the scenarios are socially, economically and environmentally detrimental.

## First Nations

An individual submission notes that aboriginal rights are protected and have been recognized under the Canadian constitution and in recent court decisions. By setting the AAC high, says this individual, the chief forester would impose unacceptable costs on First Nations and expose the Crown to potential liability for compensation for infringement of aboriginal rights.

# Appendix 1

## Submissions received by the Kootenay Lake Forest District

### Submissions received on the Data Package

**Forest industry**

Interior Lumber Manufacturers' Association (two submissions)
Kootenay Lake Forestry Association, Licensees (two submissions)

**Interest groups**

Queens Bay Residents Association

**General public**

2 individual submissions

### Submissions received on the Timber Supply Analysis Report

**Forest industry**

Tembec Industries Ltd.–BC Division (two submissions)
Kootenay Lake Forestry Association
Celcrest Timber/Wynndel Box & Lumber

**Interest groups**

Kootenay Centre for Forestry Alternatives
Valhalla Wilderness Society
Queens Bay Residents Association
Erickson Water Users Society

**General public**

4 individual submissions